WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Well ands / Rock Flats	Site Cit	y/County:	efferso Sampling Date: 9/10/
Applicant/Owner: \(\rightarrow \overline{\rightarrow} \rightarrow \r	10. 71	1 1 1	State: <u>C</u> Sampling Point: <u>F</u> C I -
Applicant/Owner:	Kastens Se	ction, Township, R	ange: T25 R70W Sec. 10
Landform (hillslope, terrace, etc.):	botton Lo	cal relief (concave	, convex, none): Slope (%):/
Subregion (LRR):(
Soil Map Unit Name: NA -mitigate a			
Are climatic / hydrologic conditions on the site typical for t			
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology			needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map			
Hydrophytic Vegetation Present? Yes X	No	1- (1- 01-	
Hydric Soil Present? YesX_	No	Is the Sample	nd? Yes No
Wetland Hydrology Present? YesX_		All A li	
Remarks: Met no	nd circun	n stances	Forms borrow pit area.
The same as the		,	product source product.
VEGETATION III			
VEGETATION – Use scientific names of pla	nts.		a a fa
Tree Stratum (Plot size:)		ominant Indicator	Dominance Test worksheet:
		pecies? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC (excluding FAC-): (A)
3.			Total Number of Descious
4			Total Number of Dominant Species Across All Strata: (B)
9 a 1 gr g 1	=T		Descent of Descinant Consis
Sapling/Shrub Stratum (Plot size: () Man)		otal covor	Percent of Dominant Species That Are OBL, FACW, or FAC: / OD (A/E
1		FACW	
2. SAEXI 3. SAAMI		FACW	Prevalence Index worksheet:
3. SAAMI		<u>FACW</u>	
10:45		FAC	FACW species x 2 =
5. Them on This	4 11/19/14		
Herb Stratum (Plot size: Local)	<u> </u>	otal Cover	FAC species x 3 = FACU species x 4 =
1	3	FACW	UPL species x 5 =
2	35	Y FACW	Column Totals: (A) (B)
3. <u>A6571</u>	8	FACW	
4. <i>PAVII</i>	12	Y FAC	Prevalence Index = B/A =
5. PHPRI	6	FACU	Hydrophytic Vegetation Indicators:
6. GRSQ1	41	FACU	1 - Rapid Test for Hydrophytic Vegetation
7ALSCI		FAC	2 - Dominance Test is >50%
8. ASLAI		FACU	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin
9. Pomoi		FACW	data in Remarks or on a separate sheet)
10AGCA		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	$\frac{71.75}{14} = Tc$	otal Cover	¹ Indicators of hydric soil and wetland hydrology must
	14 fro	m back 21d page	be present, unless disturbed or problematic.
	00.119		Hydrophytic
			Hydrophytic
2	= To	otal Cover	Vegetation
	= To	otal Cover	Present? Yes No
2			Present? Yes No
2 % Bare Ground in Herb Stratum <u>30 %</u>		otal Cover	Present? Yes No

V

	Color (n		%	Color ((moist)	x Features	Type ¹	Loc ²	Texture	Remarks
0-3	10YR	516	45	10 YR	7/1	15	0	Ped face:	VGR-C	-
				7.5 YR	5/8	20	C	11		
 z-7	7.5 Y R	614		7548	5/8	30		P. 1 f.	VICE - C	
				10 YR				11		
7-12+	IOYR	7/1	75	10 YR	5/8	2 4	_	P. 15		
	10 (14	''		7.5 71				lea sece		-
¹Type: C=Co	ncentration.	D=Deple	 etion RM				or Coa		ains ² l o	cation: PL=Pore Lining, M=Matrix.
Hydric Soil In	ndicators:	(Applica	ble to all	LRRs, unl	ess other	wise note	d.)	teu Sariu Or		for Problematic Hydric Soils ³ :
Histosol (Sleyed Mat				Muck (A9) (LRR I, J)
	ipedon (A2)					Redox (S5)				Prairie Redox (A16) (LRR F, G, H)
Black His						Matrix (Se				Surface (S7) (LRR G)
Hydrogen		4)				Mucky Mine)		Plains Depressions (F16)
Stratified					Loamy (Reved Mat	riv (F2)			RR H outside of MLRA 72 & 73)
1 cm Muc				$\overline{\mathbf{x}}$	Depleted	d Matrix (F	3) `´			ed Vertic (F18)
Depleted	Below Dark	Surface	(A11)			Dark Surfac				arent Material (TF2)
Thick Dar					Depleted	d Dark Sur	face (F7	7)		hallow Dark Surface (TF12)
	ucky Minera			-	Redox D	Depression	s (F8)			(Explain in Remarks)
2.5 cm Mi						ins Depres	•	,	³ Indicators	of hydrophytic vegetation and
5 cm Muc	cky Peat or f	Peat (S3)	(LRR F)		(MLI	RA 72 & 73	3 of LR	R H)	wetland	d hydrology must be present,
Restrictive La								•	unless	disturbed or problematic.
Type:	nes):				AT-080 411 9					
Depth (inch	nes):				mad	in a	ligh	+ gran		Present? Yes X No
Depth (inch Remarks:	hes):				mad	in a	ligh	t gran		
Depth (inches Remarks:	hes): ≶o.	ay h			Money	in a	ligh	+ gran		
Depth (inch Remarks: S HYDROLOG Wetland Hydr	nes): So. \	as h	ae	veen F			ligh	t gran	, C n	naterial.
Depth (inche Remarks: Solution Primary Indica Prim	nes): SY rology Indic stors (minim	as h	ae	reen F	that apply)	ligh	t gran	Seconda	naterial, ny Indicators (minimum of two requir
Depth (inch Remarks: S IYDROLOG Wetland Hydr Primary Indica X Surface W	Soll m.	cators:	ae	rcen f	that apply) B11)		+ gray	Seconda Surfa	naterial, ny Indicators (minimum of two require ace Soil Cracks (B6)
Depth (inch Remarks: IYDROLOG Wetland Hydr Primary Indica X Surface W High Wate	FY rology Indicators (minimal Vater (A1) er Table (A2)	cators:	ae	I; check all S A	that apply alt Crust (quatic Inv) B11) ertebrates	(B13)	t gran	Seconda Surfa Spar	ry Indicators (minimum of two require ace Soil Cracks (B6) rsely Vegetated Concave Surface (B
Depth (inch Remarks: S S S S S S S S S S S S S	FY rology Indicators (minimulators (A1) er Table (A2)	cators:	ae	; check all	that apply alt Crust (quatic Inv) B11) ertebrates Sulfide Odd	(B13) or (C1)		Seconda Surfa Spar	ry Indicators (minimum of two requirence Soil Cracks (B6) resely Vegetated Concave Surface (Banage Patterns (B10)
Depth (inch Remarks: SYDROLOG Wetland Hydr Primary Indica X Surface W High Wate X Saturation Water Mai	For I was a second of the seco	az h	ae	I; check all S A H	that apply alt Crust (quatic Inv lydrogen S	B11) ertebrates Sulfide Odd	(B13) or (C1) ble (C2))	Seconda Surfa Spar Drair Oxid	ry Indicators (minimum of two requirence Soil Cracks (B6) rsely Vegetated Concave Surface (Binage Patterns (B10) rized Rhizospheres on Living Roots (
Depth (inch Remarks: S S S S S S S S S S S S S	rology Indictors (minimulater (A1) er Table (A2) rks (B1) Deposits (B	az h	ae	; check all	that apply alt Crust (quatic Inv lydrogen S ry-Seasor xidized Rl	B11) ertebrates Gulfide Odd n Water Ta	(B13) or (C1) ble (C2)		Seconda Surfa Spar Spar Drain Oxid (w)	ry Indicators (minimum of two require ace Soil Cracks (B6) rsely Vegetated Concave Surface (B nage Patterns (B10) ized Rhizospheres on Living Roots (here tilled)
Depth (inch Remarks: SYDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depo	rology Indictors (minimulator (A1) er Table (A2) i (A3) rks (B1) Deposits (B) sits (B3)	cators: um of one	ae	i; check all S A H D	that apply alt Crust (quatic Inv ydrogen S ry-Seasor xidized RI (where n	B11) ertebrates Gulfide Odo n Water Ta hizosphere ot tilled)	(B13) or (C1) ble (C2) ss on Liv) ving Roots (C	Seconda Surfa Spar Spar Spar Drair Oxid C3) (wi	ny Indicators (minimum of two required ace Soil Cracks (B6) reely Vegetated Concave Surface (Banage Patterns (B10) ized Rhizospheres on Living Roots (here tilled) fish Burrows (C8)
Depth (inch Remarks: IYDROLOG Wetland Hydr Primary Indica X Surface W High Wate X Saturation Water Man Sediment Drift Depo	For the service of th	cators: um of one	ae	l; check all S A H D 0	that apply alt Crust (quatic Inv ydrogen S ry-Seasor xidized RI (where n resence o	B11) ertebrates Sulfide Odo n Water Ta hizosphere ot tilled) f Reduced	(B13) or (C1) ble (C2) s on Liv) ving Roots (C	Seconda Surfa Spar Spar Coxid Cox	ny Indicators (minimum of two required ace Soil Cracks (B6) resely Vegetated Concave Surface (Bonage Patterns (B10) red Rhizospheres on Living Roots (here tilled) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Depth (inch Remarks: HYDROLOG Wetland Hydr Primary Indica X Surface W High Wate X Saturation Water Man Sediment Drift Depo	GY rology Indicators (minimal Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B3) or Crust (B4) sits (B5)	cators: um of one ()	e required	; check all	that apply alt Crust (quatic Inv ydrogen S ry-Seasor xidized RI (where n resence o hin Muck S	B11) ertebrates Sulfide Odo n Water Ta hizosphere ot tilled) f Reduced Surface (C	(B13) or (C1) ble (C2) s on Liv Iron (C) ving Roots (C	Seconda Surfa Spar Spar Coxid Coxid Coxid Coxid Satu Satu Satu Satu	ny Indicators (minimum of two require ace Soil Cracks (B6) sely Vegetated Concave Surface (Bonage Patterns (B10) ized Rhizospheres on Living Roots (here tilled) fish Burrows (C8) ration Visible on Aerial Imagery (C9) morphic Position (D2)
Depth (inch Remarks: IYDROLOG Wetland Hydr Primary Indica X Surface W High Wate X Saturation Water Man Sediment Drift Depo	rology Indicators (minimal Vater (A1) Per Table (A2) rks (B1) Deposits (B3) rks (B3) or Crust (B4) sits (B5) n Visible on a	cators: um of one 2) 4) Aerial Ima	e required	; check all	that apply alt Crust (quatic Inv ydrogen S ry-Seasor xidized RI (where n resence o hin Muck S	B11) ertebrates Sulfide Odo n Water Ta hizosphere ot tilled) f Reduced	(B13) or (C1) ble (C2) s on Liv Iron (C) ving Roots (C	Seconda Surfa Spar Spar Coxid Cox	ry Indicators (minimum of two required ace Soil Cracks (B6) assets Vegetated Concave Surface (Benage Patterns (B10) aized Rhizospheres on Living Roots (Center tilled) fish Burrows (C8) aration Visible on Aerial Imagery (C9) morphic Position (D2)
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Depth (inch Remarks: S S S S S S S S S S S S S	rology Indicators (minimum (A3) rks (B1) Deposits (B3) or Crust (B4) sits (B5) a Visible on a ined Leaves (Minimum (B4)) rks (B5) a Visible on a ined Leaves (Minimum (B4)) rks (B5) a Visible on a ined Leaves (Minimum (B4)) rks (Minimum (B4))	cators: um of one 2) Aerial Ima s (B9)	e required	I; check all S A D O P Ti	that apply alt Crust (quatic Inv lydrogen S ry-Seasor exidized Ri (where no resence of hin Muck S ther (Expl	B11) ertebrates Sulfide Odo n Water Ta hizosphere ot tilled) f Reduced Surface (C	(B13) or (C1) ble (C2) is on Liv Iron (C- 7) aarks)) ving Roots (0	Seconda Surfa Spar Spar Coxid Cox	ry Indicators (minimum of two required ace Soil Cracks (B6) assets Vegetated Concave Surface (Benage Patterns (B10) aized Rhizospheres on Living Roots (Center tilled) fish Burrows (C8) aration Visible on Aerial Imagery (C9) morphic Position (D2)
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Depth (inch Remarks: S S S S S S S S S S S S S	rology Indicators (minimum Vater (A1) er Table (A2 in (A3) er Ks (B1) Deposits (B3) or Crust (B4 sits (B5) in Visible on a ined Leaves attions:	cators: um of one 1) Aerial Ima s (B9) Yes	e required	I; check all S A D TI TI O No C	that apply alt Crust (quatic Inv lydrogen S ry-Seasor xidized RI (where n resence o hin Muck S ther (Expl	B11) ertebrates Sulfide Odo n Water Ta hizosphere ot tilled) f Reduced Surface (C ain in Rem	(B13) or (C1) ble (C2) is on Liv lron (C-7) narks)) ving Roots (0	Seconda Surfa Spar X Drair Oxid C3) (wi Cray Satu X Geor FAC-	ry Indicators (minimum of two required ace Soil Cracks (B6) ace Soil Cracks (B10) aced Rhizospheres on Living Roots (here tilled) fish Burrows (C8) aration Visible on Aerial Imagery (C9) arother Position (D2) arother Hummocks (D7) (LRR F)
Depth (inch Remarks: SYDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Man Sediment Drift Depo Algal Mat of Iron Depos Inundation Water-Stai Field Observa Surface Water Water Table Pr Saturation Pres Sincludes capill	rology Indicators (minimum Vater (A1) Per Table (A2) rks (B1) Deposits (B4) sits (B3) or Crust (B4) sits (B5) n Visible on a indicators: Present? resent? lary fringe)	cators: um of one 1) Aerial Ima 5 (B9) Yes Yes	e required	; check all S A D O O O O O O O O O	that apply alt Crust (quatic Inv lydrogen S ry-Seasor exidized RI (where n resence o hin Muck S ther (Expl	B11) ertebrates Sulfide Odo n Water Ta hizosphere of tilled) f Reduced Surface (C ain in Rem	(B13) or (C1) ble (C2) is on Liv lron (C-7) harks)) ving Roots (0 4) — Wetlar	Seconda Surfa Spar Spar Oxid C3) (wi Cray Satu FAC Frost	ry Indicators (minimum of two required ace Soil Cracks (B6) assets Vegetated Concave Surface (Benage Patterns (B10) aized Rhizospheres on Living Roots (Center tilled) fish Burrows (C8) aration Visible on Aerial Imagery (C9) morphic Position (D2)
Depth (inch Remarks: IYDROLOG Wetland Hydr Primary Indica X Surface W High Water X Saturation Water Man Sediment Drift Depo Inundation Water-Stai Field Observa Surface Water Water Table Pr Saturation Presincludes capill Describe Reco	rology Indicators (minimal Vater (A1) er Table (A2 in (A3) er Ks (B1) Deposits (B3) or Crust (B4 sits (B5) in Visible on a ined Leaves in the control of the	cators: um of one 2) Aerial Ima s (B9) Yes Yes Yes Stream ga	agery (B7	I; check all S A D D Ti O	that apply alt Crust (quatic Inv ydrogen S ry-Seasor exidized RI (where n resence o hin Muck S ther (Expl Depth (incl Depth (incl	B11) ertebrates Gulfide Odo n Water Ta hizosphere of tilled) f Reduced Surface (C ain in Rem hes): hes):	(B13) or (C1) ble (C2) es on Liv lron (C-7) earks)	ying Roots (0	Seconda Surfa Spar X Drair Oxid C3) (wi Cray Satu X Geor FAC- Frost	ry Indicators (minimum of two required ace Soil Cracks (B6) ace Soil Cracks (B10) aced Rhizospheres on Living Roots (here tilled) fish Burrows (C8) aration Visible on Aerial Imagery (C9) arother Position (D2) arother Hummocks (D7) (LRR F)

Wetland Determination Data Form - Great Plains Region Extra Page for Vegetation Species

Date		9/10/14			
Sampli	ing Point	FCI-1B	(426)	•	
Tree St	tratum				
			Absolute	Dominant	Indicator
		Scientific Name	% Cover	Species?	Status
5					_
6					
7					
8					
9					
10					
		E 2		= Total Cov	er

Sapling/Shrub Stratum

	Scientific Name		Dominant Species?	
6			7	
7				
8				
9				
10		,		
			- Total Cau	

= Total Cover

Herb Stratum

			Absolute	Dominant	Indicator
		Scientific Name	% Cover	Species?	Status
78	11	ASPOI			FACU
79	12	HOJOI	6		FACW
80	13	SCACI	41	7.	OBL
81	14	AGSMI	41		FACU
85	15	ASFAI	41		FACU
83	16	MEALI	<1		FACU
84	17	ASSPI	41		FAC
85	18	ANGEL	2		FALU
8%	19	ELMAI	4	L	OBL
87	20	SONUI	21		FALU
88	21	ANSCI	<1	2	FACU
89	22	POPRI	41		FACU
90	23	ELERI	41	1	FAC
91	24	AMARI.	<1	1 4	FACU
92	25	XASTI	21		FAC
-	26			•	
L	27	80			
L	28			-	
	29		2	_	
	30				
L	31	21			
	32				
L	33		12		
L	34		2		
L	35				

(4) = Total Cover

Over > ? no

Wetland Determination Data Form - Great Plains Region Extra Page for Vegetation Species

Date				
Sampli	ng Point		_	
Tree St	ratum		-	
	Scientific Name	Absolute % Cover		Indicator Status
11				Otatus
12				
13				
14				
15				
			= Total Cov	/er
Sapling	/Shrub Stratum			
	Scientific Name	Absolute % Cover	Dominant Species?	Indicator

14	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
111				
12				
13				
14				
15				· · · · · · · · · · · · · · · · · · ·

= Total Cover

Herb Stratum

		Scientific Name	Absolute % Cover		Indicator Status
<u> </u>	36		7	1	Otatus
	37			 	
	38		+	-	
	39		 		
	40			 	
	41		 		
	42			 	
	43				
	44				
	45		 		
	46			<u> </u>	
	47				
	48				
	49		 		
	50				
	51		 		
	52		 		
	53				
	54		 		
	55				
	56				
	57				
	8				
	9				
	30				
	51				

= Total Cover

Wetland Qualitative Rev	egetation Evaluation	Form			F	Form #_	
Date	9/10/14	_					
Observer(s) Location ID	FCI-IB (n:	<u> </u>					
Photographs taken today?	Y	$\widehat{\mathbb{N}}$					
Are desired wetland plant	species present?	Ý) 1	1				
Are there any issues regard	ling the establishment	of the des	sired we	tland spe	ecies? E	xplain, i	f so.
h.o							
Are the hydrologic condition	ons appropriate for suc	ccessful es	stablishn	nent and	sustaina	bility of	the
wetland. If not, describe the	ne problem/issue.						
- Geo							-1
Yes							
Yes							
Woody Plant Counts							
			Height			Width	
Species	Stem Count	1	Height 2	3		2	3
Species TAR	Stem Count	1 2'	Height 2	3	1	2	
TAR SAA1	Stem Count A1 2 n1 7	1 2' 1,5'	Height 2		1 // 2'	2	3
Species TAR	Stem Count A1 2 n1 7 E1 2	1 2'	Height 2	3	1	2	

Noxious weed evaluation. See separate noxious weed evaluations conducted throughout the summer months (June – August).

Suggestions for management:

Control weeds (TARAI) as needed,

Other comments:

Aren Filling in nicely, Will continue to improve over time.

Completed by: Date 9/10/14